

THREE-DIMENSIONAL TEXTILE COMPOSITE STRUCTURE AND
MANUFACTURE AND USE THEREOF
ABSTRACT OF THE DISCLOSURE

5 A three-dimensional cellular textile composite structure with energy-
absorbing capacities under multiple impacts is provided. The cellular textile
composite structure includes a base, and at least one progressively
collapsible projection extending from the base for absorbing energies under
the multiple impacts. The projection includes a non-woven textile material
10 supported in a thermoplastic matrix material such that the projection is
capable of retaining energy-absorption capacity at least after the first impact
of the multiple impacts.